

UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS

AMAZIN' RAISINS INTERNATIONAL,	)	
INC.,	)	
Plaintiff,	)	
v.	)	Cr. No. 04-12679-MLW
	)	
OCEAN SPRAY CRANBERRIES, INC.,	)	
Defendant	)	

MEMORANDUM AND ORDER

WOLF, D.J.

August 20, 2007

I. SUMMARY

This is an action for patent infringement filed by plaintiff Amazin' Raisins International, Inc. ("Amazin' Raisins") against defendant Ocean Spray Cranberries, Inc. ("Ocean Spray"), concerning Ocean Spray's product, the "Craisin." Amazin' Raisins asserts that the manufacturing process employed by Ocean Spray to create the Craisin infringes Claim 1 of United States Patent Number 5,188,861, which was issued February 23, 1993, and assigned by the inventor, Jack Mazin, to Amazin' Raisins (the "Mazin patent").<sup>1</sup> Claim 1 involves a process for making flavored dried fruit products by treating dried fruit with an acidulant to remove the fruit's natural flavor.

Ocean Spray has moved for summary judgement. Amazin' Raisins

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<sup>1</sup>The applicant is referred to as Amazin' Raisins in this Memorandum.

opposes the motion. A tutorial concerning the technology at issue was presented to the court. A hearing on the motion for summary judgment was subsequently held.

For the reasons described in detail in this Memorandum, the court concludes that the Ocean Spray is entitled to summary judgment. Most significantly, the court finds that the undisputed facts demonstrate that, in contrast to the process covered by Claim 1 of the Mazin patent, Ocean Spray's process does not infuse flavor into "dried fruit" and does not use an acidulant to remove flavor. Therefore, Ocean Spray does not literally infringe that patent. Nor is there infringement under the doctrine of equivalents.

## II. THE STANDARD FOR SUMMARY JUDGMENT

The court's discretion to grant summary judgment is governed by Federal Rule of Civil Procedure 56. Rule 56 provides, in pertinent part, that the court may grant summary judgment only if "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(c); see also Karlin Tech. Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 970 (Fed. Cir. 1999). "Summary judgment is as appropriate in a patent case as in any other." Avia Group Int'l, Inc. v. L.A. Gear Calif., Inc., 853 F.2d 1557, 1561 (Fed. Cir. 1988) (citations and internal quotations omitted).

The facts must be viewed in the light most favorable to the non-moving party. Rodine PLC v. Seagate Tech., Inc., 174 F.3d 1294, 1301 (Fed. Cir. 1999), cert. denied, 528 U.S. 1115 (2000); . "When a party fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party bears the burden of proof at trial, there can no longer be a genuine issue as to any material fact . . . and the moving party is entitled to judgment as a matter of law." Smith v. Stratus Computer, Inc., 40 F.3d 11, 12 (1st Cir. 1994), cert. denied, 514 U.S. 1108 (1995) (citation omitted). More specifically, as the Federal Circuit has explained, "[t]o support a summary judgment of noninfringement it must be shown that, on the correct claim construction, no reasonable jury could have found infringement on the undisputed facts or when all factual inferences are drawn in favor of the patentee." TechSearch, L.L.C. v. Intel Corp., 286 F.3d 1360, 1371 (Fed Cir. 2002).

In determining the merits of a motion for summary judgment, the court is compelled to undertake two inquiries: (1) whether the factual disputes are genuine; and (2) whether any fact genuinely in dispute is material. Anderson v. Liberty Lobby, 477 U.S. 242, 247-48. "As to materiality, the substantive law will identify which facts are material. Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment." Id. To determine if the dispute

about a material fact is "genuine," the court must decide whether "the evidence is such that a reasonable [factfinder] could return a verdict for the nonmoving party." Id. In deciding a motion for summary judgment, the court may only rely on admissible evidence. See Feliciano v. Rhode Island, 160 F.3d 780, 787 (1st Cir. 1998) ("Fed. R. Civ. P. 56(e) requires the parties to submit admissible evidence in supporting and opposing motions for summary judgment.").

### III. FACTS

Claim 1 of the Mazin patent is the only patent claim at issue in this case. It states:

A process for preparing a flavored dried fruit product said process comprising:

(a) treating a dried fruit with an acidulant being selected from the group consisting of tartaric acid, malic acid, citric acid, ascorbic acid, phosphoric acid and fumaric acid, in an amount and for a period of time which is sufficient to substantially remove the natural flavor of the dried fruit;

(b) dehydrating the treated dried fruit to obtain a desired moisture content; and,

(c) treating the dried fruit during step (a) or after step (b) with a flavoring agent having a flavor which does not substantially correspond to the natural flavor of the dried fruit, said flavoring agent being employed in an amount and for a period of time which is sufficient to impart to the dried fruit a flavor which is substantially the same as the flavoring agent;

and so forming a flavored dried fruit product having a flavor which is substantially the same as the flavor of the flavoring agent and having an outer surface which is substantially non-sticky whereby the flavored dried fruit product may be easily handled.

See Mazin Patent at 10:1-24 (emphasis added).

Unless otherwise indicated, the following facts are

undisputed. The Mazin patent discloses a process for manufacturing dried fruit products with flavors that are different from the original flavor of the underlying fruit. Methods of making dried fruit products with non-natural flavors have existed for about 100 years. The Mazin patent describes one of these early methods, U.S. Patent No. 1,717,489, issued in 1929 (the "Barlow patent"). The Barlow process combines fruits, either dried or in the process of drying, with the juice of another fruit. The dried fruits are placed in a vat and either sprayed or immersed in the juice. Once the flavoring process is complete, the fruit may be dried with juice remaining on the outer surface to make a sticky product or the juice may be rinsed off with water before drying to eliminate some of the stickiness.

The method disclosed in the Mazin patent is a variation of this long-used process. As described in the specification, the process works as follows. The process begins with a dried fruit. The specification, but not the claim language, states that "any dried fruit which contains between about 10% to 18% moisture may be employed." Mazin patent at 3:60-62. The dried fruit is placed in a solution to perform a "one-step rehydration." Id. at 4:14-17. The solution contains water and an acidulant, which, according to the patent, removes natural flavor from the dried fruit. The solution can also contain flavoring, like fruit juices and artificial flavors. Sodium citrate--the sodium derivative of

citric acid--may also be added to the flavor solution to provide a more tart taste. After rehydrating the fruit and removing the flavor, the fruit is dehydrated to bring its moisture content back to the range of 12% to 18%. Id. at 5:42-50, 6:22-34.

Claim 1 was originally rejected by the Patent and Trademark Office (the "PTO") as obvious in light of the Barlow patent in combination with U.S. Patent No. 4,542,033 (the "Agarwala patent") and the Chemical Rubber Company Book of Food Additives, which the patent examiner called "the Furia text." See Woodford Decl., Ex. 3, 2-4. The examiner explained that the Barlow patent disclosed every limitation in Claim 1 except for the use of "accessory ingredients, e.g. acids." Id. at 3. The examiner concluded that the use of acid disclosed in these references in combination with the Barlow process was a "routine matter well within the ordinary skill of one in the art" and the claims recite "nothing more than an obvious recipe." Id. at 4.

Amazin' Raisins responded to the examiner's rejection of Claim 1 in April, 1991 with a proposed amendment to Claim 7 of the Mazin patent and a series of remarks explaining why Claim 1 should be viewed as nonobvious in light of the prior art. First, Amazin' Raisins emphasized at several points the fact that the claimed process is directed only to the treatment of dried fruit and distinguished dried fruit from "fresh" fruit. For example, it reaffirmed the statements in the specification and argued that the

process is a "one step rehydration and a one step dehydration, which process is advantageous over Barlow." Id., Ex. 4, at 4. More pointedly, Amazin' Raisins emphasized the fact that the Agarwala patent treated fresh fruit (including previously frozen fruit) as opposed to dried fruit. It wrote: "Applicants submit that Agarwala teaches the use of these agents in a process involving a cooking syrup which is applied to fresh fruit pieces. Thus, there is no teaching or suggestion in Agarwala to the preparation of a dried fruit product as claimed in the present invention." Id. at 7.

Amazin' Raisins similarly attempted to distinguish the purpose of using acid in its process from known uses of acid additives for flavoring in the prior art. Amazin' Raisins stated that "while the use of acid is known in the food additive industry, it is not obvious to use acids in the specific step to prepare the meat of the dried fruit for rehydration." Id. Amazin' Raisins argued that the prior art did not teach or suggest the use of acid to substantially remove the flavor of the dried fruit. Id.

The PTO evidently found these argument persuasive. It issued the Mazin patent.

Ocean Spray's allegedly infringing process functions as follows. Ocean Spray begins with large quantities of frozen cranberries, which are cleaned and sorted to roughly uniform size and then sliced and defrosted in hot cranberry juice. The sliced,

defrosted cranberries are discharged into a piece of equipment called a "counter current extractor" ("CCE"), where the fruit juice is extracted from the cranberries.

The fruit then travels up the CCE while water or permeate (a water byproduct that is essentially water) flows down the CCE, washing most of the soluble fruit solids (e.g. acids, sugars, other cranberry flavor components) out of the fruit. Ocean Spray calls this process "osmosis."

During osmosis, soluble material flows from a region of greater concentration to a region of lesser concentration. Essentially, the sugars, acids, and other soluble fruit solids in the cranberries migrate out of the cranberries, displaced by the water or permeate. By the time the fruit finishes traveling through the CCE it has little remaining acids, sugars, and other soluble fruit solids. Ocean Spray refers to this interim product as "decharacterized fruit." The cranberry extracts exit the CCE at its bottom and are collected for later use or sale by Ocean Spray.

In connection with the tutorial presented to the court, the parties agreed that the moisture content of the defrosted cranberries entering the CCE is approximately 87%. See Joint Tutorial Statement at 5. Ocean Spray states that after the CCE process is complete, the moisture content of the cranberry pieces remains at approximately 90%. Scott Decl., ¶6. Amazin' Raisins asserts that Ocean Spray has not actually measured the moisture



content of its cranberry pieces after the CCE process. See Sorensen Decl., Ex. 3, at 64 and Ex. 2, at 128-31. However, Harold Mantius, the inventor of the Ocean Spray process, testified that after the CCE process the moisture content of the decharacterized fruit is roughly the same as when it went into the CCE and, as a result of replacing sugar and acid with water, the cranberry slice itself remained "structurally intact and very, very moist. I mean, it's wet." Supp. Woodford Decl., Ex. 9, at 101. In any event, it is undisputed that Amazin' Raisins has not measured the moisture content of the cranberry pieces after the CCE process, although it could have done so during discovery in this case. Following the CCE process, the decharacterized fruit enters a "counter current infuser" ("CCI"). The CCI is much like the CCE, except that in the CCI an infusion syrup, consisting of sugar, a coloring agent, and citric acid, flow down the CCI, infusing the decharacterized fruit.

Throughout the CCI process, Ocean Spray closely monitors and regulates the acidity of the resulting fruit product. No acidulant is added to the water or permeate in the CCE process of removing flavor. Ocean Spray only uses citric acid to add the tart flavor characteristic of cranberries during the CCI infusion process. Ocean Spray closely monitors the acidity of the cranberry pieces, first reducing it from 2.4% to .25%, and then, during infusion, increasing the acid content to a range of 1.2% to 1.8%.

Once out of the CCI, the infused fruit pieces are sticky because of the sugar content of the infusion syrup. Without this sweetener, the fruit would be inedible. The fruit is then washed or shaken to remove excess syrup. It is next dried by being conveyed on moving belts, which Ocean Spray refers to as a "dryer." Upon entering the belt, the fruit has a moisture content of 46 to 60%. Upon exit, the moisture content for Ocean Spray's product is less than 18%.

When it is discharged from Ocean Spray's dryer, the fruit remains very sticky. It exists mostly in clumps. To prevent the fruit from sticking to the equipment's surface, Ocean Spray applies oil to both the equipment and the fruit as it is discharged from the dryer. A second layer of oil is applied to break up clumps further and reduce stickiness. A declumping mechanism is then used to reduce clumping further. Nevertheless, some fruit pieces continue to stick together and must be manually separated. A topical flavor is then applied to the fruit's outer surface. Finally the fruit is sealed and packaged.

#### IV. ANALYSIS

Ocean Spray has moved for summary judgment on three grounds: (1) that its process does not treat "dried fruit" as that term is used in Claim 1 of the Mazin patent; (2) that its process does not use an acidulant to remove flavor from cranberries as required by Claim 1; and (3) that its process does not come within Claim 1's

limitation requiring "an outer surface which is substantially non-sticky whereby the flavored dried fruit product may be easily handled."<sup>2</sup> Amazin' Raisins opposes all three grounds for summary judgment.

"An infringement analysis entails two steps. The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing." Kraft Foods Inc. v. Int'l Trading Co., 203 F.3d 1362, 1366 (Fed. Cir. 2000). Claim 1 of the Mazin patent requires treating a "dried fruit" with an acidulant to remove the natural flavor of the fruit. The court construes "dried fruit" to mean fruit with a moisture content of approximately 10 to 18%. It is undisputed that the moisture content of the fruit that Ocean Spray places in the CCE to remove its flavor is about 87%. Ocean Spray has presented admissible evidence that the moisture content of the decharacterized fruit that emerges from the CCE deflavoring process is about the same. Amazin' Raisins has the burden of proving infringement. See Techsearch, 286 F.3d at 1371. However, it presents no admissible evidence to place in genuine dispute Ocean Spray's contention concerning the moisture of the fruit before and after its flavor is removed. A moisture content of about 87% is not approximately 10

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<sup>2</sup>Because Ocean Spray is entitled to summary judgment on the first two grounds, the court is not deciding the third.

to 18%. Therefore, Ocean Spray's process does not treat dried fruit to remove its flavor as required by Claim 1.

In addition, the fact that Ocean Spray does not use an acidulant to remove flavor from its fruit, as also required by Claim 1, is not genuinely in dispute. Rather, it uses water or a permeate to remove flavor. It only uses an acidulant, sodium citrate, to infuse--add--flavor.

Therefore, Ocean Spray's process does not literally infringe Claim 1. As explained below, it also does not infringe under the doctrine of equivalents. Accordingly, Ocean Spray's motion for summary judgment is meritorious.

A. Ocean Spray's Process Does Not Treat A Dried Fruit

Ocean Spray asserts that its manufacturing process does not infringe Claim 1 of the Mazin patent, because it does not treat "dried fruit" as that term is used in Claim 1. Ocean Spray contends that one of ordinary skill in the relevant art would understand "dried fruit" to mean "fruit with a moisture content between about 10% to 18%." In support of this interpretation, Ocean Spray contends that the court should rely on the intrinsic record, the patent's written description, and prosecution history. It argues that the court should disregard extrinsic evidence offered by Amazin' Raisins.

In contrast, Amazin' Raisins contends that one of ordinary skill in the relevant art would understand "dried fruit" to mean a

"fruit or fruit piece that has had a portion of its naturally occurring moisture content removed." In support of this construction, Amazin' Raisins urges the court to look beyond the intrinsic record to extrinsic testimony offered by its two experts.

The court concludes that neither party's construction is correct, although Ocean Spray's is quite close to correct. The court concludes that a person of ordinary skill in the art of food processing, reading Claim 1 in light of the written description and the prosecution history, would understand "dried fruit" to mean "fruit from which natural moisture has been removed which has approximately 10 to 18% moisture remaining."

In construing the term "dried fruit," the court has considered the purposes of the patent law and patents, as well as the principles of claim construction articulated by the Court of Appeals for the Federal Circuit. "A patent is a government grant of rights to the patentee." Markman v. Westview Instruments, Inc., 52 F.3d 967, 968 (Fed. Cir. 1995) (en banc), aff'd, 517 U.S. 370 (1996). Among other things, it gives the patentee rights, for a limited period of time, to exclude others from using the invention claimed. Id. A patent serves as a species of "deed which sets out the metes and bounds of the property the inventor owns for the term and puts the world on notice." Id. at 997. This notice informs the public, and in particular, a patentee's competitors, of the scope of the patentee's claimed invention. See Vitronics Corp. v.

Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed. Cir. 1996). At the same time, such notice informs a competitor, who may be contemplating an expensive investment, of what is permissible. "Competitors are entitled to review the public record, apply the established rules of claim construction, ascertain the scope of the patentee's claimed invention and, thus, design around the claimed invention." Id. at 1583. The notice function also provides a competitor assurance that "if infringement litigation occurs, [] a judge, trained in the law, will similarly analyze the test of the patent and its associated public record and apply the established rules of construction, and in that way arrive at the true and consistent scope of the patent owner's rights to be given legal effect." Markman, 52 F.3d at 979.

It is a "bedrock principle" of patent law that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." Phillips v. AVH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005). "[T]he claim construction inquiry, therefore, begins and ends in all cases with the actual words of the claim." Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1248 (Fed. Cir. 1998). Those words are generally given their ordinary and customary meaning, as construed by a person of ordinary skill in the art in question at the time of invention. See Phillips, 415 F.3d at 1312-13.

In some cases, the ordinary meaning of claim language as understood by persons of skill in the art may be readily apparent even to lay judges, and claim construction in those cases involve little more than the application of the widely accepted meaning of commonly understood words. Id. at 1314. "In such circumstances, general purpose dictionaries may be helpful." Id. at 1314. Here, the term "dried" in Claim 1 modifies fruit, indicating that "dried fruit" is a fruit that has had some amount of its usual moisture removed. The Princeton WordNet dictionary defines "dried fruit" as "fruit preserved by drying," and defines "dried" both as a verb ("remove the moisture from and make dry") and an adjective ("preserved by removing natural moisture"). See Princeton WordNet, <http://wordnet.princeton.edu/perl/webwn>. Merriam Webster's dictionary defines "dried" as "to make dry," and defines "dry" as, among other things, "free or relatively free from a liquid and especially water" and "devoid of natural moisture." See Merriam-Webster Online, <http://m-w.com/cgi-bin/dictionary>. However, neither of these definitions makes the meaning of "dried fruit" to one of ordinary skill in the art readily apparent. Rather, these definitions are ambiguous concerning how much moisture must be removed to say that a fruit has been dried and concerning how "dry" the fruit must be to be considered "dried fruit."

The person of ordinary skill in the art would properly read a claim term not only in the context of the particular claim in which

it appears, but in the context of the entire patent, including the specification. See Phillips, 415 F.3d at 1313. The specification "is always highly relevant to the claim construction analysis. Usually it is dispositive; it is the single best guide to the meaning of a disputed term." Id. at 1315 (citing Vitronics, 90 F.3d at 1582).

Two interpretive principles guide reliance on the specification. The court generally may not read a limitation into a claim from the written description, but the court can generally look to the written description to interpret a term already in a claim limitation which requires definition. See Renishaw, 158 F.3d at 1248. In this case, the term "dried fruit" is in Claim 1 and requires definition.

Where a patentee acts as lexicographer, the patentee's definition of term governs. See Phillips, 415 F.3d at 1316. In this case, however, Amazin' Raisins has not expressly defined "dried fruit" in the specification. Therefore, the court must decide whether the specification indicates what, if any, moisture content "dried fruit" as used in Claim 1 must have. The court may rely in part on dictionary definitions when construing the meaning of the term "dried fruit" as it is used in Claim 1, but only so long as such reliance accords with the intrinsic record. See Atofina v. Great Lakes Chem. Corp., 441 F.3d 991, 996 (Fed. Cir. 2006) (citing Phillips, 415 F.3d at 1322-24 and Free Motion



Fitness, Inc. v. Cybex Int'l, Inc., 423 F.3d 1343, 11348049 (Fed. Cir. 2005)).

The court understands that "[i]t is usually incorrect to read numerical precision into a claim from which it is absent, particularly when other claim contain the numerical limitation." Modine Mfg. Co. v. United States Int'l Grade Comm'n, 75 F.3d 1545, 1551 (Fed. Cir. 1996). However, there are circumstances in which it is necessary and appropriate to construe a claim to include a numerical range found only in the specification. Id. at 1552. Indeed, as discussed below, Modine was such a case. Id.

Generally, when, as here, there is a term in a claim that requires further definition, the written description may provide that definition. See Renishaw, 158 F.3d at 1248; Johnson Worldwide Assocs., Inc. v. Zebo Corp., 175 F.3d 985, 990 (Fed. Cir. 1999) ("there must be a textual reference in the actual language of the claim with which to associate the proffered claim construction.").

The written description "can provide guidance as to the meaning of the claims, thereby dictating the manner in which the claims are to be construed even if the guidance is not provided in explicit definitional format." Thus, when a patentee uses a claim term throughout the entire patent specification in a manner consistent with only a single meaning, he has defined that term "by implication."

Bell Atlantic Network Servs., Inc. v. Covad Communs. Group, Inc., 262 F.3d 1258, 1271 (Fed. Cir. 2001) (quoting Advanced Cardiovascular Sys. Inc. v. Scimed Life Sys. Inc., 261 F.3d 1329,

1344 (Fed. Cir. 2001) and Vitronics, 90 F.3d at 1582) (emphasis in original).

This is a case in which the term "dried fruit" is defined by implication in the specification. As indicated earlier, that term in Claim 1 requires further definition. The term is not expressly defined in the written description. However, the written description repeatedly and consistently refers to the dried fruit to be treated at the outset of the patented process to remove flavor as having "between about 10 to 18% moisture." See Mazin patent, 3:60-62. 3:64-4:4, 4:14-17; 6:65-9:67. Therefore, a person ordinarily skilled in the art would understand that the patent claimed and covered a process that removed flavor from fruit with moisture in that range. Thus, Claim 1 must be construed as a process that begins with fruit having between about 10 to 18% moisture.

More specifically, in the "Detailed Description of the Invention," the first paragraph states:

The dried fruit which may be flavored employing the processes of the invention include peach, apple, pear, raisins, prunes, apricots, and cherries. Any dried fruit which contains between about 10% to 18% moisture may be employed. The process can be employed on whole or sectioned pieces of dried fruit.

Id. at 3:58-63. This precedes any discussion of the patent's preferred embodiment, which is discussed in the immediately following paragraphs, see id. at 3:64-6:60, or other embodiments, listed after the preferred embodiment, id. at 6:65-9:67. Of the

seven fruits included in the quoted paragraph, only two--raisins and prunes--are themselves inherently dried fruit. The Princeton Wordnet Dictionary defines a raisin a "dried grape" and a prune as a "dried plum." See Princeton WordNet, <http://wordnet.princeton.edu/perl/webwn>. The others fruits--peaches, apples, pears, apricots, and cherries--are not inherently dried fruit. Something must be done to make them dried fruit. The sentence immediately following the list of fruits indicates that the five other fruits become dried fruit for purposes of the patent when water is removed so that they have about 10 to 18% moisture. See Mazin patent at 3:60-63.

This is consistent with the patent's preferred and other embodiments, all of which teach one ordinarily skilled in the art how to apply Amazin' Raisins's process to raisins. Id. at 3:64-9:67. Each embodiment is consistent with the requirement that the fruit have a moisture range of about 10 to 18%. Example 1 states that "the treated raisins were then dehydrated . . . to 12% moisture remaining in the product." Id. at 7:2-7. Examples 2 to 8 rely expressly on Example 1. Id. at 7:11-8:9. Examples 9 and 10, on which Examples 11 to 14 rely, use an "Australian sultana raisin." Id. at 8:11-9:67. The patent does not expressly indicate what moisture range of the sultana raisin. However, the United States Department of Agriculture regulations, which both Ocean Spray and Amazin' Raisins accept as they apply to raisins, indicate

that all raisins, except the Monukka variety, can contain no more than 18% moisture, by weight. See 7 C.F.R. § 52.1846 (1990). The Monukka variety, which is not mentioned in the Mazin patent, may not contain more than 19% moisture content. Id. Therefore, each of the embodiments in the Mazin patent is consistent with a construction that "dried fruit" is fruit that has about a 10 to 18% moisture range.

The Detailed Description of the Invention, which precedes the Examples, states:

The processing of many of the different dried fruits will require conditions specifically adapted to the dried fruit. The following description will be restricted to the conditions which are particularly suitable for preparing raisin products but it will be understood that persons skilled in the art, given the particular process conditions and steps set forth in this general description as well as in the Examples, could readily adapt the processes of the invention to other dried fruits.

Id. at 4:5-13. This language indicates that the patentee did not intend that Claim 1, which covers dried fruits generally, be limited by the patent's preferred embodiments, all of which involve raisins and are specifically covered by Claims 2 to 6. Id. at 10:26-12:17. The court understands that generally a patentee's claim cannot be limited to the patent's embodiments, even if only one embodiment exists, unless the embodiment is the "invention itself." See Modine, 75 F.3d at 1551; Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1326 (Fed. Cir. 2004).

However, as indicated earlier, the language referring to the about 10 to 18% moisture range appears before this statement, and before any of the embodiments. This language would communicate to one skilled in the art what moisture level a fruit like a "peach, apple, pear, . . . apricot[], and cherr[y]" must have in order to be employed in the process described in Claim 1. The statement that "persons skilled in the art, given the particular process conditions and steps set forth in this general description as well as in the Examples, could readily adapt the processes of the invention to other dried fruits," Mazin patent at 4:9-13 (emphasis added), would instruct one ordinarily skilled in the art who wishes to apply the process covered by Claim 1 to a non-dried fruit to look both to the general description, which teaches that fruits other than raisins should be reduced to roughly 10 to 18% moisture levels prior to exposure to the Mazin process, and to the embodiments, all of which involve raisins consistent with a moisture range of "about 10 to 18%." See Mazin patent at 3:64-4:4, 4:14-17; 6:65-9:67.

Therefore, because the specification assigns significance to the numerical range and because the specification, including the embodiments, repeatedly use a consistent moisture range, it is appropriate to construe Claim 1 as covering dried fruit as fruit which has a moisture content of about 10 to 18%. See Advanced Cardiovascular, 261 F.3d at 1139 (stating exception to general

proscription again importing limitations from specification into general claim language where the "specification assigns significance" to the limitation); Bell Atlantic, 262 F.3d at 1271 (finding a claim term defined by "implication" where the specification used the term consistently throughout).

In essence, the court finds that this case is closely comparable to Bell Atlantic. In Bell Atlantic, the Federal Circuit addressed whether the district court had correctly construed the claim term "mode." 262 F.3d at 1271. In affirming the district court's construction, the Federal Circuit rejected the contention that its construction of the term "mode" improperly imported a limitation found in the specification's embodiments into a claim term. Id. at 1270. It reached this conclusion after describing how the Summary of the Invention, the Detailed Description of the Preferred Embodiments, and every other reference to the term "mode" in the written description was consistent and supported the district court's construction. Id. at 1270-73. Therefore, the Federal Circuit concluded that:

We acknowledge that it is generally impermissible to limit claim terms by a preferred embodiment or inferences drawn from the description of a preferred embodiment. Johnson Worldwide, 175 F.3d at 992. However, that is not the case here. We note that "the usage 'preferred' does not of itself broaden the claims beyond their support in the specification." Wang Labs., Inc. v. America Online, Inc., 197 F.3d 1377, 1383 (Fed. Cir. 1999). Moreover, unlike Johnson Worldwide, this case does not involve the "varied use of a disputed term." Id. at 991. Instead, the patentees defined the term "mode" by implication, through the term's consistent use throughout the '786 patent specification. Vitronics, 90 F.3d at 1582. Given this

definition, the three modes described in the Detailed Description of the Preferred Embodiments describe the three possible modes of the invention, and the claims are not entitled to any broader scope. Wang, 197 F.3d at 1383.

Id. at 1273.

As the instant case too involves a claim term, dried fruit, that requires further definition and the written description repeatedly and consistently describes dried fruit as fruit with a range of moisture of about 10 to 18%, the term has been defined by implication. Id.

This conclusion is not qualified by the decisions on which Amazin' Raisins primarily relies. Rather, each of those cases is distinguishable from Bell Atlantic and the instant case in material respects.

In contrast to RF Delaware, Inc. v. Pacific Keystone Technologies, Inc., 326 F.3d 1255, 1263 (Fed. Cir. 2003), and like Bell Atlantic, the instant case does not involve claim language that is "clear on its face." Id. at 1263. Therefore, reference to the Specification is proper here. See Bell Atlantic, 262 F.3d at 1270. Moreover, unlike RF Delaware, this case does not involve importing a limitation from a dependent claim into an independent claim, violating the principle of claim differentiation. See RF Delaware, 326 F.3d at 1263.

Edwards Systems Technologies, Inc. v. Digital Control Systems, Inc., 99 Fed. Appx. 911 (Fed. Cir. 2004), also implicated the doctrine of claim differentiation. More specifically, Edwards

involved the impermissible importation of a numerical range from a narrower dependent claim into an independent claim. Id. at 917-18. However, there is no comparable dependent claim in the instant case.

In contrast to Bell and the instant case, in Modine the term at issue was not used consistently throughout the specification. See 75 F.3d at 1552-54. However, despite the general proscription against importing numerical ranges from the specification into general claim terms, in Modine the Federal Circuit found that the embodiment in which the numerical range was found was the "invention itself" and, therefore, was properly imported into the general claim language. Id. at 1551-52.

Finally, Edwards Systems and Specialty Composites v. Cabot Corp., 845 F.2d 981 (Fed. Cir. 1988) were cases in which no significance was attached to the disputed reference in the specification. See Edwards, 99 Fed. Appx. at 917-18; Specialty Composites, 845 F.2d at 987. They were, therefore, analogous to cases in which the Federal Circuit declined to use drawings in the specification to limit claim language because "nothing in the specification assign[ed] significance to the drawings." Advanced Cardiovascular, 261 F.3d at 1339. In the instant case, however, the specification's discussion of non-dried fruits suitable for use with the Mazin process, if dried to a range of about 10 to 18%, assigns significance to the numerical range. This case, therefore,



is comparable to cases in which limitations were properly found in the specification. See e.g., Kraft Foods, 203 F.3d at 1367-69 (indicating that the claim term "protecting back panel" was limited to a "relatively stiff" panel because, in addition to other intrinsic evidence, the specification's text described the back panel in the patent's drawings as being "constructed of a relatively stiff material"); Toro Co. v. White Consol. Indus., 199 F.3d 1295, 1300-02 (Fed. Cir. 1999) (construing the claim term "including" to mean "part of" and "permanently attached" because, in addition to the patent's drawings, the specification's text stressed that the claimed vacuum/blower's flow restriction ring was part of and attached to the invention's air inlet cover); Wang Lab., 197 F.3d at 1382-83 (noting that the claims were limited to a character-based protocol because of the express teachings of such a protocol in both the patent's specification and the drawings)

Therefore, as stated earlier, the court concludes that one reasonably skilled in the relevant art would construe "dried fruit" as used in Claim 1 of Mazin patent to include fruit with a moisture range of "about 10 to 18%" before the flavor is removed. Generally, the use of "about" is intended to avoid a "strict numerical boundary to the specified parameter." Pall Corp. v. Micron Separations, 66 F.3d 1211, 1217 (Fed. Cir. 1995). However, unless the patentee serves as his own lexicographer and defines the term differently, it should be given its ordinary and accustomed

meaning of "approximately." See Conopco, Inc. v. May Dep't Stores Co., 46 F.3d 1556, 1561 n.2 (Fed.Cir. 1994). Construed in light of the claim language and the specification, "about" in this case means "approximately."

The Mazin patent generally teaches a process for raisins which have about 10 to 18% moisture content. Claim 1 is broader, encompassing any "dried fruit." The remainder of the claims, which cover only raisins, the written description, and the embodiments, also all raisins, would teach one ordinarily skilled in the art who wished to apply the process to a fruit other than a raisin that it is necessary to dry that fruit to a moisture content of approximately 10 to 18% before removing the flavor.

The prosecution history is consistent with this construction of "dried fruit." As a general rule, the court looks to prosecution history, the final piece of the intrinsic record, after reviewing the claim language and the specification. See Phillips, 415 F.3d at 1317. Because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and is, therefore, less useful for claim construction purposes. Id. Nevertheless, the prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor

limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be. Id.

In this case the prosecution history shows that the PTO originally rejected the Mazin patent as obvious in light of the prior art. In order to overcome this objection, Amazin' Raisins made statements distinguishing the prior art. Particularly relevant is the argument that was made to distinguish the Mazin process from the Agarwala patent. As described earlier, the Agarwala patent teaches a process for treating fresh fruit, including frozen or canned fruits. Woodford Decl., Ex. 4, at 7. Amazin' Raisins emphasized to the PTO that Agarwala disclosed treating fresh fruit, while the Mazin process involved dried fruit. Id. This indicates that Amazin' Raisins understood that the prior art encompassed fruits with sufficient moisture to be deemed "fresh" and supports a construction of dried fruit that has an upper moisture range limit.

The court recognizes that it has the discretion to consider the extrinsic record, although such evidence is less significant than anything in the intrinsic record. See Phillips, 415 F.3d at 1317-18. However, "a court should discount any expert testimony 'that is clearly at odds with the claim construction mandated by the claims themselves, the written description, and the prosecution history, in other words, the written record of the patent.'" Id. at

1318 (quoting Key Pharma. v. Hercon Lab. Corp., 161 F.3d 709, 716 (Fed. Cir. 1998)).

Amazin' Raisins has proffered the expert testimony of one of the Mazin patent's inventors, Amir Lalji, and of Dr. Keith Cadwallader, a professor of food sciences at the University of Illinois. Both opine, in identical words, that "dried fruit" for the purposes of Claim 1 means a "fruit or fruit piece that has had a portion of its naturally occurring moisture removed." See Cadwallader Decl., ¶ 5; Lalji Decl., ¶ 6.

The court finds that this proffered expert evidence deserves little, if any weight. Cadwallader testified that Lalji and he had never spoken. See Second Supp. Woodford Decl., Ex. 10, at 141. The fact that they provide the identical definition of dried fruit suggests that the definition was contrived by counsel solely for the purposes of this litigation and, therefore, "suffer[s] from a bias that is not present in [the] intrinsic evidence." See Phillips, 415 F.3d at 1318.

Moreover, as an inventor, Lalji's testimony is "entitled to little or no consideration." Bell & Howell Document Mgmt. Prods. C. v. Altek Sys., 132 F.3d 701, 706 (Fed. Cir. 1997). This is because "[t]he testimony of an inventor often is a self-serving after-the-fact attempt to state what should have been part of his or her patent application." Id.

Moreover, the expert opinions of both Lalji and Cadwallader are clearly at odds with the intrinsic evidence. See Phillips, 415 F.3d at 1318. Their definition of dried fruit would effectively eliminate the repeated, consistent references to a moisture range of "about 10 to 18%" in the written description. This would be inappropriate. See Curtis-Wright Flow Control Group v. Velan, Inc., 438 F.3d 1374, 1381 (Fed. Cir. 2006); Asyst Techs. v. Emtrak, Inc., 402 F.3d 1188, 1195 (Fed. Cir. 2005); Phillips, 415 F.3d at 1318-19. Adopting their definition of dried fruit would also be inconsistent with the distinction the patentee made between fresh and dried fruit to overcome the initial rejection for obviousness. See Conoco, Inc. v. Energy & Env'tl. Int'l, L.C., 460 F.3d 1349, 1364 (Fed. Cir. 2006).

In essence, the court finds that this is the quintessential case contemplated by the Federal Circuit when it wrote:

Once a dispute over claim construction arises, "experts" should also not be heard to inject a new meaning into terms that is inconsistent with what the inventor set forth in his or her patent and communicated, first to the patent examiner and ultimately to the public. Patents should be interpreted on the basis of their intrinsic record, not on the testimony of such after-the-fact "experts" that played no part in the creation and prosecution of the patent. See Southwall Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1578 (Fed. Cir. 1995) ("Evidence extrinsic to the patent and prosecution history, such as expert testimony, cannot be relied on to change the meaning of the claims when that meaning is made clear by those documents."). Use of expert testimony to explain an invention may be useful. But reliance on extrinsic evidence to interpret claims is proper only when the claim language remains genuinely ambiguous after consideration of the intrinsic evidence, Vitronics, 90 F.3d at 1584, i.e., when the intrinsic evidence is "insufficient to enable the court to construe

disputed claim terms." Id. at 1585. Accordingly, any expert testimony that is inconsistent with unambiguous intrinsic evidence should be accorded no weight. Id. at 1584 (citing Southwall, 54 F.3d at 1578; Markman, 52 F.3d at 983.

Bell & Howell, 132 F.3d at 706. Therefore, the court has given little, if any, weight to the opinions of Amazin' Raisins' experts. These opinions do not alter the court's construction of the term "dried fruit" as it is used in Claim 1.

Accordingly, the court construes "dried fruit" to mean "fruit from which natural moisture has been removed which has about 10 to 18% moisture remaining." The term "about" means "approximately." See Conopco, 46 F.3d at 1561, n.2.

The court must, therefore, decide if the evidence would permit a reasonable factfinder to conclude that the Ocean Spray process involves removing flavor from fruit with a moisture content of approximately 10 to 18%. See Kraft, 203 F.3d at 1366. As explained earlier, in deciding this motion for summary judgment, the court must determine whether the admissible evidence puts any material fact genuinely in dispute. See Feliciano, 160 F.3d at 787. "When a party fails to make a showing sufficient to establish the existence of an element essential to that party's case, and on which that party bears the burden of proof at trial, there can be no longer be a genuine issue as to any material fact . . . and the moving party is entitled to judgment as a matter of law." See Smith, 40 F.3d at 12; see also Techsearch, 286 F.3d at 1369.

Amazin' Raisins has the burden of proving infringement. See Techsearch, 286 F.3d at 1371. It is undisputed that prior to being subject to the CCE process which removes its flavor, the defrosted cranberries used by Ocean Spray have a moisture content of approximately 87%. On behalf of Ocean Spray, its Senior Operations Manager, Michael Scott, has provided an affidavit, based on personal knowledge, asserting that at the end of the CCE process, the moisture content of the cranberries remained about 90%. See Scott Decl., ¶6. Consistent with this, Mantius, the inventor of the Ocean Spray process, testified that the CCE process essentially replaced sugars and acids with water. See Supp. Woodford Decl., Ex. 9, at 101. Therefore, the moisture content at the end of the CCE process remains roughly the same and the emerging product is "very, very moist," indeed "wet." Id.

While Amazin' Raisins argues that Ocean Spray has not actually measured the moisture content of its product at the end of the CCE process, it is undisputed that Amazin' Raisins has not measured it either. Nor has it submitted any other evidence of the moisture content after the CCE process is complete. Therefore, there is no evidence that would permit a reasonable factfinder to conclude that Ocean Spray's decharacterized fruit has a moisture content in approximately the 10 to 18% range.

In Conopco, the Federal Circuit found that there was "simply no basis for interpreting the phrase 'about 40:1' to encompass [a]

162.9:1 ratio. That would imply an expansion of the term 'about' to encompass over a fourfold increase in the specified numerical ratio and thus would ignore the ordinary meaning of that term." 46 F.3d at 1561. The approximately 87% moisture content of the fruit from which Ocean Spray removes flavor, which is also about the moisture content after the flavor is removed, is more than four times greater than the 10 to 18% range the Mazin patent uses to define dried fruit. 87% is not about 18%, the upper end of that range. Therefore, a reasonable factfinder could not conclude that Ocean Spray's process removes flavor from dried fruit. Thus, Ocean Spray has "shown that, on the correct claim construction, no reasonable jury could [find literal] infringement on the undisputed facts or when all reasonable inferences are drawn in favor of the patentee." Techsearch, 286 F.3d at 1371. Accordingly, Ocean Spray is entitled, for this reason alone, to summary judgment on the contention that it literally infringes Claim 1.

In addition, the evidence compels the conclusion that Ocean Spray does not infringe Claim 1 under the doctrine of equivalents. Ocean Spray cannot recover claim scope that it surrendered during prosecution to obtain the patent. See Conoco, Inc., 460 F.3d at 1363-64. In this case, Amazin' Raisins, in its amendment letter responding to the patent examiner's initial rejection of its patent, distinguished its patent on several grounds. With regard to the term "dried fruit," it asserted that its process is (1)



directed at dried fruit, unlike the Barlow process, and (2) does not treat fresh fruit, unlike the Agarwala process. See Woodford Decl. Ex. 4, at 4, 7. This evinces a "clear and unmistakable" surrender of subject matter--fresh fruit and fruit that is not dry. See Deering Precision Instruments, L.L.C. v. Vector Distrib. Sys., 347 F.3d 1314, 1326 (Fed. Cir. 2003) ; Conoco, 460 F.3d at 1363-64. That is, after reading the patent and the prosecution history, "'a competitor would reasonably believe that [Amazin' Raisins] had surrendered'" any claim to fresh fruit and non-dry fruit in Claim 1. Conoco, 460 F.3d at 1363-64 (quoting Cybor, 138 F.3d at 1457).

Moreover, even assuming that Amazin' Raisins did not evince a "clear and unmistakable" surrender, it still would not prevail under the doctrine of equivalents because that doctrine may not operate to vitiate an entire claim limitation. See Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997); Asyst, 402 F.3d at 1195. In essence, Amazin' Raisins cannot reclaim by equivalents what the language of the patent disclaims--fresh and non-dry fruit. See Asyst, 402 F.3d at 1195.

Accordingly, as the court finds that the evidence, even when viewed in the light more favorable to the plaintiff, is not sufficient to prove that the Ocean Spray process removes flavor from "dried fruit," Ocean Spray is entitled to summary judgment on the contentions that it infringes Claim 1 of the Mazin patent literally or under the doctrine of equivalents.

B. Ocean Spray Does Not Treat Dried Fruit With An Acidulant In A Manner Intended to Substantially Remove the Natural Flavor Of The Dried Fruit

Although the court's construction of "dried fruit" as used in Claim 1 of the Mazin patent is alone sufficient to grant Ocean Spray's motion for summary judgment, that motion is also meritorious on another ground. In addition to not using dried fruit, Ocean Spray's manufacturing process does not use an acidulant to remove flavor from cranberries.

Step (a) of Claim 1 requires "treating a dried fruit with an acidulant . . . in an amount and for a period of time which is sufficient to substantially remove the natural flavor of the dried fruit." See Mazin patent at 10:3-8 (emphasis added). Although Ocean Spray stipulates that it uses citric acid, an acidulant, as part of its infusion process, the parties disagree on the meaning of the word "remove" as used in Claim 1. Ocean Spray asserts the claim language plainly requires the use of an acidulant to remove natural flavor, and not to add flavor as occurs in its infusion process. Amazin' Raisins argues that Ocean Spray in fact uses citric acid to remove flavor.

The court construes Claim 1 to require the use of an acidulant to remove the fruit's flavor and also finds that using an acidulant to add flavor back to the fruit is not within the scope of Claim 1. The express claim language indicates that Amazin' Raisin's process requires the use of an acidulant to remove the natural flavor of

the dried fruit. Id. at 10:7-8. The specification is consistent with this language, repeatedly stating that the purpose of the acidulant is to remove the flavor from the dried fruit. Id. at 2:58-66, 4:38-66, 5:56-64, 6:13-17. Indeed, the specification distinguishes the use of citric acid to remove flavor and the use of citric acid to add flavor. Id. at 5:37-41. As explained earlier, Amazin' Raisins made similar distinctions during prosecution to overcome the use of citric acid as a food additive in the prior art following the patent examiner's rejection of their initial claims. See Woodford Decl. Ex. 4, at 6.

As with the term "dried fruit," the word "remove" as explicitly used in Claim 1, and as repeatedly and consistently used in the specification and the prosecution history, cannot be properly construed to include the act of addition. See Phillips, 415 F.3d at 1317-19. Moreover, any extrinsic evidence on the meaning of "remove" is being disregarded, as it directly contradicts the clear and unambiguous intrinsic record, specifically the claim language, the specification, and the prosecution history. Id. The act of removal is necessarily different than the act of addition. See Asyst, 402 F.3d at 1195; Moore U.S.A., Inc. v. Standard Register Co., 229 F.3d 1091, 1106 (Fed. Cir. 2000).

It is undisputed that Ocean Spray uses water or cranberry juice permeate to remove flavor from its cranberry pieces during

the CCE extraction process. No acidulant is added to the water or permeate in the CCE phase of the process. Ocean Spray only uses citric acid to add the tart flavor characteristic of cranberries during the CCI infusion process. Ocean Spray closely monitors the acidity of the cranberry pieces, first reducing it from 2.4% to .25%, and then, during infusion, increasing the acid content to a range of 1.2% to 1.8%. Based on the foregoing, Ocean Spray does not literally infringe Claim 1 by using an acidulant to substantially remove flavor.

Nor does Ocean Spray infringe Claim 1 under the doctrine of equivalents. First, Amazin' Raisins expressly acknowledged the use of citric acid as a food additive existed in the prior art and distinguished its claim on the grounds that the prior art did not suggest the use of acid to remove flavor. Woodford Decl. Ex. 4, at 6. Second, even if Amazin' Raisins did not evince a clear and unmistakable intention to disclaim the use of citric acid as a flavor additive, it cannot use the doctrine of equivalents to encompass subject matter already existing in the prior art, see K-2 Corp., 191 F.3d at 1367, or to reclaim by equivalents what the express language of the patent disclaims--the act of adding flavor, as opposed to removing it. See Warner-Jenkinson, 520 U.S. at 29; Asyst, 402 F.3d at 1195; Moore, 229 F.3d at 1106.

Therefore, the court is also granting Ocean Spray's motion for summary judgment on the ground that its process does not use an acidulant to remove flavor from cranberries as required by Claim 1.

As Ocean Spray has two meritorious grounds for being granted summary judgment, it is not essential that the court decide its third contention that Ocean Spray's process does not produce a product whose outer surface is substantially non-sticky, as required by Claim 1. Although this contention also appears to be meritorious, the court is not deciding this issue.

V. ORDER

In view of the foregoing, it is hereby ORDERED that Ocean Spray's Motion for Summary Judgment (Docket No. 55) is ALLOWED.

/s/ MARK L. WOLF  
UNITED STATES DISTRICT JUDGE